

CLAIM LISTING

1. (previously presented) A method for enabling wireless presence-based services comprising:

monitoring, by a wireless communications network, messaging and messaging responses of a mobile station (MS), wherein the messaging and the messaging responses do not specify a presence state of the MS or a presence state change by the MS;

inferring, by the wireless communications network, a change in the presence state of the MS based upon the monitoring, wherein inferring comprises inferring the MS presence state has changed when the presence state of the MS indicates that the MS is present and messaging is detected that indicates MS activity from the group consisting of powering down, deregistering, entering an unavailable mode, handing off outside the wireless communication network, and involved in other communication;

communicating, by the wireless communications network, the state change to a presence server.

2. (original) The method of claim 1, wherein the messaging responses comprise responses from the group consisting of a page response, a short data burst (SDB) acknowledgment, a status response message, a short message service (SMS) acknowledgment, and a layer 2 acknowledgment.

3-5. (canceled)

6. (original) The method of claim 1, wherein inferring comprises:
inferring the MS presence state has changed when the presence state of the MS indicates that the MS is non-present and messaging is detected that indicates MS activity from the group consisting of powering up, registering, exiting an unavailable mode, handing off into the wireless communication network, and performing other communication.

7. (original) The method of claim 1, further comprising:
signaling, by the wireless communications network, the MS with messaging to which the MS is required to respond.
8. (original) The method of claim 7, wherein messaging to which the MS is required to respond comprises messaging from the group consisting of a page, a short data burst (SDB) message, a status request message, and a short message service (SMS) message.
9. (original) The method of claim 7,
wherein monitoring comprises maintaining last-known-location information for the MS based on the messaging and the messaging responses,
wherein signaling the MS comprises signaling the MS in a group of at least one cell based on the last-known-location information for the MS.
10. (canceled)
11. (canceled)
12. (original) The method of claim 7, wherein monitoring comprises receiving, by the wireless communications network, a messaging response in response to the signaling and wherein the method further comprises:
inferring, by the wireless communications network, no change in a presence state of the MS based upon the monitoring;
confirming, by the wireless communications network, the presence state to a presence server.
13. (original) The method of claim 7,
wherein monitoring comprises detecting that a period of time has passed after signaling the MS in which no response to the signaling has been received,
wherein the no response within the period of time is a messaging response,

wherein inferring comprises inferring a change in the presence state of the MS based upon the messaging response when the presence state of the MS indicates that the MS is present.

14. (original) The method of claim 7,
wherein monitoring comprises detecting that a period of time has passed after repeatedly signaling the MS in which no response to the signaling has been received,
wherein the no response within the period of time is a messaging response,
wherein inferring comprises inferring a change in the presence state of the MS based upon the messaging response when the presence state of the MS indicates that the MS is present.

15. (canceled)

16. (canceled)

17. (original) The method of claim 7,
wherein the wireless communications network comprises a control function and a base station (BS),
wherein the control function sends a signaling request message to the BS,
wherein signaling the MS comprises signaling by the BS in response to the signaling request message.

18-26. (canceled)

27. (original) The method of claim 17,
wherein inferring comprises inferring, by the control function, a change in the presence state of the MS based upon the monitoring;
wherein communicating comprises communicating, by the control function, the state change to a presence server.

28. (previously presented) A wireless communications network comprising:
wireless transceiver equipment adapted to receive messaging and messaging responses of a mobile station (MS);
a wireless presence proxy, communicatively coupled to the wireless transceiver equipment,
adapted to monitor the messaging and the messaging responses of the MS, wherein the messaging and the messaging responses do not specify a presence state of the MS or a presence state change by the MS,
adapted to infer a change in the presence state of the MS based upon the monitoring, wherein being adapted to infer comprises being adapted to infer the MS presence state has changed when the presence state of the MS indicates that the MS is present and messaging is detected that indicates MS activity from the group consisting of powering down, deregistering, entering an unavailable mode, handing off outside the wireless communication network, and involved in other communication,
adapted to communicate the state change to a presence server.
29. (original) The wireless communications network of claim 28, wherein the presence server comprises a presence server from the group consisting of an instant messaging (IM) server and a push-to-talk (PTT) server.
30. (original) The wireless communications network of claim 28, wherein the messaging responses comprise responses from the group consisting of a page response, a short data burst (SDB) acknowledgment, a status response message, a short message service (SMS) acknowledgment, and a layer 2 acknowledgment.
31. (original) The wireless communications network of claim 28, wherein the wireless presence proxy is further adapted to signal via the wireless transceiver equipment the MS with messaging to which the MS is required to respond.

32. (original) The wireless communications network of claim 31,
wherein monitoring comprises detecting that a period of time has passed after
repeatedly signaling the MS in which no response to the signaling has been received,
wherein the no response within the period of time is a messaging response,
wherein inferring comprises inferring a change in the presence state of the MS
based upon the messaging response when the presence state of the MS indicates that
the MS is present.

33. (original) The wireless communications network of claim 31,
wherein monitoring comprises maintaining last-known-location information for the
MS based on the messaging and the messaging responses,
wherein signaling the MS comprises signaling the MS in a group of at least one
cell based on the last-known-location information for the MS.

34. (previously presented) A method comprising:
receiving, by a base station (BS) from network equipment, a short data delivery message;
signaling by the BS a mobile station (MS) in response to the short data delivery message;
sending by the BS a short data acknowledgment message to the network equipment indicating whether a response from the MS was received for the signaling of the MS by the BS.
35. (previously presented) The method of claim 34, wherein sending by the BS a short data acknowledgment message to the network equipment indicating whether a response from the MS was received comprises
in response to receiving by the BS an acknowledgment from the MS in response to the signaling by the BS, sending by the BS a short data acknowledgment message to the network equipment indicating that a response from the MS was received.
36. (previously presented) The method of claim 34, wherein the short data delivery message comprises a message of a type that is used for conveying a small, limited amount of data to an MS.
37. (previously presented) The method of claim 34,
wherein the short data delivery message indicates a signaling location within which to signal the MS and
wherein signaling the MS in response to the short data delivery message comprises signaling the MS in the signaling location indicated.
38. (previously presented) The method of claim 37, wherein the signaling location indicated comprises location information of a type from the group consisting of a cell ID, a base station ID, a list of cell IDs, and a location area code (LAC).